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Chief, Supplemental Programs Division, OC
 ATTN : ELINT Activities Branch
 Chief, Engineering Division, OC

6 July 1956



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1. The final report on the crystal video system, recently packaged [redacted] is forwarded as an attachment to this memorandum.

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2. The construction of five additional sets of system components, the antenna section, RF detector, and wire recorder excepted, is on schedule. It is anticipated that this equipment will be ready for delivery during the first week of August. The components will be identical to those installed [redacted] with the following significant improvements:

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- (a) The video amplifier bandwidth will be 400 kc instead of 200 kc.
- (b) The timing motor, filter, and demand circuitry will be packaged as a unit giving a total of three packages instead of four.
- (c) The standby current has been reduced from 10 ma to approximately 5 ma.
- (d) The response of the demand circuit has been increased to 20 kc - from 2 kc in the original unit.

3. The initial discussion with [redacted] on the construction of additional components considered the inclusion of the [redacted] video amplifier and pulse stretcher. The [redacted] circuits possess characteristics that are undoubtedly superior to those used in [redacted] [redacted] however, if full benefit is to be derived from the improved circuitry it appears unwise to use the units on a simple reproduction and plug-in basis. For this reason, and to ensure operational schedules, it was decided to use the original [redacted] components modified to include the several known improvements listed above. It was further concluded that at the completion of the components now being constructed the Laboratory should undertake to optimize a system based on the use of the [redacted] amplifier and pulse stretcher. The timing circuitry would also be re-examined to determine the feasibility of

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eliminating the need for a timing motor. At that time the antenna and RF section were not considered. If this work is still planned, it is suggested that your requirements be outlined as far in advance of the completion of the present project as possible; to do so will establish the scope of the project and aid its scheduling and assignment. The Laboratory will participate in [redacted] [redacted] this problem at the convenience of your office.

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Attachment:

[redacted] (8)

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R&D/Lab/NCP/Attachments/ACS/rkb (6 July 1956)

Distribution:

- Original and 1 - Addressee
- 1 - R&D Lab
- 1 - R&D/EP
- 1 - OC-E Chrono
- 1 - R&D Chrono
- 1 - Dev/s

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